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# HITACHI

## Video Deck



### VT-FX665A Owner's Manual

 As an ENERGY STAR® Partner, Hitachi Ltd. has determined that this product meets the ENERGY STAR® guidelines for energy efficiency. ENERGY STAR® is a U.S. registered mark.

### Your Complete Guide to Videocassette Viewing and Recording

#### Using these quality features:

- Hi-Fi system
- Rotary 4-head Record/Playback System
- Bilingual on-screen menu display selectable in English or Spanish
- Infrared remote control
- Real time tape counter
- 181 channel capability PLL frequency synthesizer tuner with direct station call
- Digital Display
- Auto power on and off system
- Auto counter reset
- Auto rewind when the end of a tape is reached
- 2 Step Picture Search Operation
- Still
- Digital Auto Tracking (DTR)
- Auto Repeat
- Three different playback tape speeds : SP/LP/SLP
- Two different recording tape speeds : SP/SLP
- IRT (Instant Recording Timer)
- 1 Year, 7 events (including Daily and Weekly Timer Recording)
- Time Search/Index Search
- Slow Motion
- S-VHS Quasi Playback (SQPB)
- Auto Clock Setting

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**WARNING:** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK,  
DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



**CAUTION**  
**RISK OF ELECTRIC SHOCK**  
**DO NOT OPEN**



**CAUTION:** TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The caution marking is located on the rear of the cabinet.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

## IMPORTANT SAFEGUARDS

- 1. Read Instructions**-All the safety and operating instructions should be read before the appliance is operated.
- 2. Retain Instructions**-The safety and operating instructions should be retained for future reference.
- 3. Heed Warnings**-All warnings on the appliance and in the operating instructions should be adhered to.
- 4. Follow Instructions**-All operating and use instructions should be followed.
- 5. Cleaning**-Unplug this video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

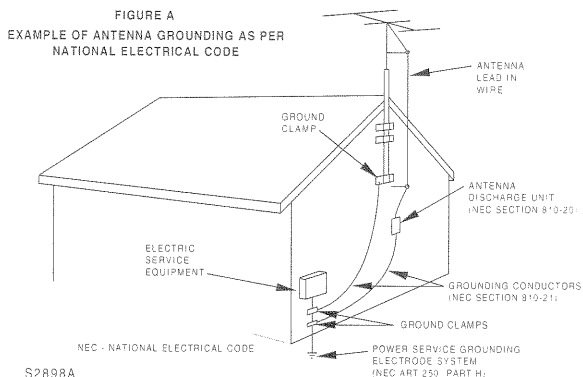
**EXCEPTION:** A product that is meant for uninterrupted service and, that for some specific reason, such as the possibility of the loss of an authorization code for a CATV converter, is not intended to be unplugged by the user for cleaning or any other purpose, may exclude the reference to unplugging the appliance in the cleaning description otherwise required in item 5.

- 6. Attachments**-Do not use attachments not recommended by the video product manufacturer as they may cause hazards.
- 7. Water and Moisture**-Do not use this video product near water, for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.

- 8. Accessories**-Do not place this video product on an unstable cart, stand, tripod, bracket, or table. The video product may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the video product. Any mounting of the appliance should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



- 9. Ventilation**-Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the video product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the video product on a bed, sofa, rug, or other similar surface. This video product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
- 10. Power Sources**-This video product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
- 11. Grounding or Polarization**-This video product is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- 12. Power Cord Protection**-Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
- 13. Outdoor Antenna Grounding**-If an outside antenna or cable system is connected to the video product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA No. 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. (Fig. A)



S2898A

- 14. Lightning**-For added protection for this video product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video product due to lightning and power-line surges.
- 15. Power Lines**-An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
- 16. Overloading**-Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
- 17. Object and Liquid Entry**-Never push objects of any kind into this video product through any openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the video product.
- 18. Servicing**-Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 19. Damage Requiring Service**-Unplug this video product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - When the power-supply cord or plug is damaged.
  - If liquid has been spilled, or objects have fallen into the video product.
  - If the video product has been exposed to rain or water.
  - If the video product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
  - If the video product has been dropped or damaged in any way.
  - If the video product exhibits a distinct change in performance-this indicates a need for service.
- 20. Replacement Parts**-When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
- 21. Safety Check**-Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.
- 22. Heat**-This video product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

## PRECAUTIONS

### LOCATION

For safe operation and optimum performance of your VCR, keep the following in mind when selecting a place for its installation:

- Shield it from direct sunlight and keep it away from sources of intense heat.
- Avoid dusty or humid places.
- Avoid places with insufficient ventilation for proper heat dissipation. Do not block the ventilation holes on the sides of the VCR.
- Install unit in a horizontal position.
- Avoid locations subject to strong vibration.
- Do not place the VCR near strong magnetic fields.
- Avoid moving VCR to locations where temperature differences are extreme.
- Do not place the VCR directly on top of the TV.

### POWER SUPPLY

- AC120V, 60Hz ONLY.

### AVOID THE HAZARDS OF ELECTRICAL SHOCK AND FIRE

- Do not handle the power cord with wet hands.
- Do not pull on the power cord when disconnecting it from AC wall outlet. Grasp it by the plug.
- If, by accident, water is spilled on your VCR, unplug the power cord immediately and take the unit to our Authorized Service Center for servicing.
- Do not put your fingers or objects into the VCR cassette holder.
- Do not place anything directly on top of the VCR.

### WARNING

Moisture condensation may occur inside the unit when it is moved from a cold place to a warm place, or after heating a cold room or under conditions of high humidity. Do not use the VCR at least for 2 hours until its inside is dry.

**FCC WARNING-** This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

### IMPORTANT COPYRIGHT INFORMATION

Unauthorized recording or use of broadcast television programming, video tape, film or other copyrighted material may violate applicable copyright laws. We assume no responsibility for the unauthorized duplication, use, or other acts which infringe upon the rights of copyright owners.

**WARNING:** TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

**ATTENTION:**POUR ÉVITER LES CHOC ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

The serial number of this product may be found on the back of the VCR. No other VCR has the same serial number as yours. You should record the number and other vital information here and retain this book as a permanent record of your purchase to aid identification in case of theft. Serial numbers are not kept on file.

Date of Purchase	
Dealer Purchase from	
Dealer Address	
Dealer Phone No.	
Model No.	
Serial No.	

# TABLE OF CONTENTS

■ <b>IMPORTANT SAFEGUARDS</b> .....	2	■ <b>SPECIAL PLAYBACK</b> .....	20
■ <b>PRECAUTIONS</b> .....	3	AUTO REPEAT PLAYBACK .....	20
LOCATION .....	3	INDEX SEARCH .....	20
POWER SUPPLY .....	3	TIME SEARCH.....	21
AVOID THE HAZARDS OF ELECTRICAL SHOCK AND FIRE .....	3	■ <b>RECORDING</b> .....	22
WARNING .....	3	VIEWING AND RECORDING THE SAME PROGRAM.....	22
■ <b>FEATURES</b> .....	5	SKIPPING UNWANTED SCENES DURING RECORDING .....	22
■ <b>OPERATING CONTROLS AND FUNCTIONS</b> ....	6	RECORDING ONE PROGRAM AND VIEWING ANOTHER .....	22
INSTALLING THE BATTERIES .....	7	TO MONITOR THE PROGRESS OF YOUR RECORDING .....	22
■ <b>PREPARATION FOR USE</b> .....	8	IRT (Instant Recording Timer).....	23
ANTENNA/CABLE CONNECTIONS .....	8	■ <b>TIMER RECORDING</b> .....	24
SETTING THE CH3/CH4 SWITCH .....	8	AUTOMATIC TIMER RECORDING .....	24
■ <b>VIDEO CASSETTE TAPE INFORMATION</b> ....	9	HINTS FOR TIMER RECORDING.....	25
■ <b>SET UP FOR USE</b> .....	10	■ <b>COPYING A VIDEO TAPE</b> .....	26
CHANNEL SET UP (Automatic) .....	10	■ <b>CONTROLLING YOUR TV OR CABLE CONVERTER WITH THE VCR'S REMOTE</b> ...	27
CLOCK SET UP.....	11	REMOTE CONTROL OF THE CABLE CONVERTER .....	27
DAYLIGHT-SAVINGS TIME .....	14	REMOTE CONTROL OF THE TV .....	28
TO DELETE OR ADD CHANNELS .....	15	■ <b>TROUBLESHOOTING GUIDE</b> .....	29
CHANNEL SET UP AGAIN .....	15	■ <b>MAINTENANCE</b> .....	29
SELECTING THE LANGUAGE .....	15	■ <b>TECHNICAL SPECIFICATIONS</b> .....	30
■ <b>MTS</b> (Multi-Channel Television Sound) <b>SYSTEM</b> .....	16		
CHECKING THE SELECTED MTS MODE ...	16		
MTS RECORDING/MONITOR MODE.....	16		
SELECTING THE MTS SYSTEM.....	17		
■ <b>PLAYBACK</b> .....	18		
NORMAL PLAYBACK .....	18		
PICTURE SEARCH.....	18		
STILL PICTURE.....	18		
VERTICAL HOLD CONTROL .....	18		
TRACKING ADJUSTMENT .....	18		
SLOW MOTION.....	19		
REAL TIME TAPE COUNTER .....	19		
AUTO REWIND .....	19		
COUNTER MEMORY .....	19		

## A NOTE ABOUT RECYCLING

This product's packaging materials are recyclable and can be reused. Please dispose of any materials in accordance with your local recycling regulations.

Batteries should never be thrown away or incinerated but disposed of in accordance with your local regulations concerning chemical wastes.

## FEATURES

**m** – The Hi-Fi stereo recording system ensures excellent sound quality with a dynamic 100dB, frequency response from 20Hz to 20,000Hz, wow and flutter 0.005%.

**Head Record/Playback System**– Rotary heads ensure excellent picture quality and superior playback.

**On-screen menu display selectable in Spanish**

**Remote control**

**Time counter**– This shows the elapsed recording and playback time in hours, minutes, and seconds. It does not work in blank areas of the tape.

**Channel capability PLL frequency synthesizer**  
**Direct station call**– (A converter may be required to view scrambled cable channels.)

**Play**

**Power on and off system**– Automatically turns the VCR on when you insert the cassette, turns off when you eject, and ejects when the beginning of a recording is reached.

**Counter reset**– (Automatically resets tape counter to 00:00" when a tape is inserted.)

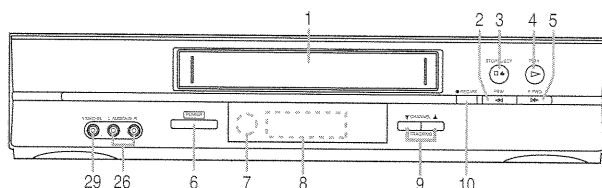
**Stop when the end of a tape is reached**– (Occurs when using the timer recording).

**Picture Search Operation**– You can view a program at a high speed or super high speed in forward or reverse direction. (Super high speed available in LP and SLP mode only)

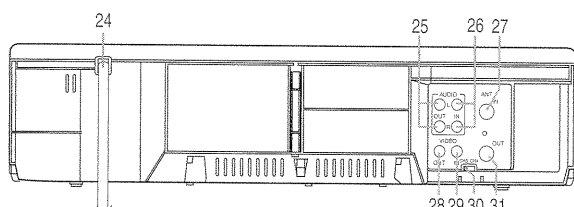
- **Still**– "Freeze" the picture at any time, for close viewing of a particular scene.
- **Digital Auto Tracking (DTR)**– Automatically adjusts the tracking for each tape you play.
- **Auto Repeat**– Allows you to repeat the playing of a tape indefinitely without pressing the PLAY button.
- **Three different playback tape speeds** : SP/LP/SLP
- **Two different recording tape speeds** : SP/SLP
- **IRT (Instant Recording Timer)**– Instant timed recording for 30 to 480 minutes is possible at the push of the REC/IRT button.
- **1 Year, 7 events (including Daily and Weekly Timer Recording)**– The built-in timer allows you to record up to 7 programs at different times on different channels up to 1 year in advance. The daily timer allows recordings to be made of daily broadcasts from Monday through Friday, and the weekly timer allows recording to be made once a week up to the end of the tape.
- **Time Search**– Lets you set the VCR to advance the tape by entering the desired playback time you want to skip.
- **Index Search**– Lets you Index the start of a recording.
- **Slow Motion**– You can view the video program at a slower than normal playback speed.
- **S-VHS Quasi Playback (SQPB)**– Allows you to view a tape recorded in S-VHS format.
- **Auto Clock Setting**– Allows you to use the clock function from the PBS broadcast.

# OPERATING CONTROLS AND FUNCTIONS

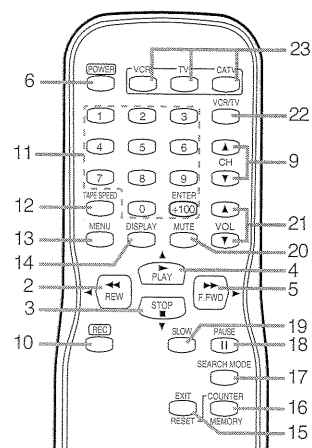
## — VCR FRONT PANEL —



## — VCR REAR PANEL —



## — REMOTE CONTROL —



### 1. Cassette Compartment

**2. REW button**— Press to rewind the tape, or to view the picture rapidly in reverse during the playback mode. (Rewind Search)

◀ **button**— Press to cancel a setting of timer program. Press to correct digits when setting program (For example: setting clock or timer program). Press to add or delete channel numbers during channel preset. (only on the remote control)

**3. STOP button**— Press to stop the tape motion.

**EJECT button**— Press to remove a tape from the VCR. (only on the VCR)

▼ **button**— Press to enter digits when setting program (For example: setting clock or timer program). Press to select the setting modes from the on screen menu. (only on the remote control)

**4. PLAY button**— Press to begin playback.

▲ **button**— Press to enter digits when setting program (For example: setting clock or timer program). Press to select the setting modes from the on screen menu. (only on the remote control)

**5. F.FWD button**— Press to rapidly advance the tape, or view the picture rapidly in forward during playback. (Forward Search)

▶ **button**— When setting program (For example: setting clock or timer program), press to determine your selection and proceed to the next step you want to input. Press to determine the setting modes from the on screen menu. Press to add or delete channel numbers during channel preset. (only on the remote control)

**6. POWER button**— Press to turn VCR on and off. Press to activate timer recording.

**7. Remote sensor window**— Receives the infrared signals from the remote control.

### 8. Digital display



**A. PWR. (Power) indicator**— Indicates that the power is turned on.

**B. Cassette indicator**— Indicates that there is a tape in the VCR.

**C. VCR indicator**— Indicates that the VCR is in the VCR position.

**D. REC indicator**— Indicates that it is recording. Flashes when a recording has been paused.

**E. ☑ (Timer) indicator**— Indicates that the timer recording or an IRT recording has been set.

**F. CLOCK indicator**— Displays current time. PM indicator appears when p.m.

**9. CHANNEL(CH) ▲ / ▼ buttons**— Press to select the desired channels for viewing or recording.

**Tracking function**— Press to minimize video 'noise' (lines or dots on screen) during playback (only on the VCR) or slow mode.

Press to stabilize the picture in the Still mode when the picture begins to vibrate vertically.

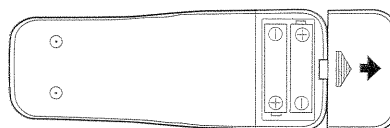
**10. REC button**— Press for manual recording.

**IRT button**— Press to activates Instant Recording Timer. (only on the VCR)

- 11. NUMBER buttons**– Press to select desired channels for viewing or recording. To select channels from 1 to 9, first press "0" button then 1 to 9. (only on the remote control)
- +100 button**– When selecting cable channels which are higher than 99, press this button first, then press the last two digits. (To select channel 125, first press "+100" button then press "2" and "5"). (only on the remote control)
- ENTER**– For details, see pages 27-28. (only on the remote control)
- 12. TAPE SPEED button**– Press to choose the desired recording speed : SP/SLP. (only on the remote control)
- 13. MENU button**– Press to display the menu on the TV screen. Press to exit the menu on the TV screen. (only on the remote control)
- 14. DISPLAY button**– Press to display the current time, channel number, real time tape counter, and other information on the TV screen. (only on the remote control)
- Each time you press this button, TV screen will change as shown. The status display (STOP, PLAY etc.) and the tape speed display (SP, LP (playback only), or SLP) will disappear after 5 seconds.
- 
- 15. COUNTER RESET button**– Press to reset counter to 0:00:00. (only on the remote control)
- EXIT button**– Press to exit the menu on the TV screen. (only on the remote control)
- 16. COUNTER MEMORY button**– Press to set counter memory on and off. (only on the remote control)
- 17. SEARCH MODE button**– Press to perform a Time Search or an Index Search. (only on the remote control)
- 18. PAUSE button**– Press to temporarily stop the tape during recording or to view a still picture during playback. (only on the remote control)
- Frame Advance function**– Press to advance the picture by one frame at a time during the still mode. (only on the remote control)
- 19. SLOW button**– Press to start slow motion playback. (only on the remote control)
- 20. MUTE button**– Press to mute the TV's sound. Press it again to resume the sound. (only on the remote control)
- 21. VOL(ume) buttons**– Press to adjust the desired TV's volume level by using either ▲ or ▼ button. (only on the remote control)
- 22. VCR/TV button**– Press to select TV or VCR mode. (only on the remote control)
- VCR position:* to view playback, to monitor video recordings or watch TV using the VCR tuner.
- TV position:* to watch TV or to view one program while recording another.
- 23. MODE SELECT buttons (only on the remote control)**
- **CATV button**– For details, see page 27.
  - **TV button**– For details, see page 28.
  - **VCR button**– For details, see pages 27 - 28.
- 24. Power cord**– Connect to a standard AC outlet (120V/60Hz).
- 25. AUDIO OUT jacks**– Connect to the audio input jacks of your audio equipment or another VCR.
- 26. AUDIO IN jacks**– Connect to the audio output jacks of your audio equipment or another VCR.
- 27. ANT. IN terminal**– Connect to an antenna, Cable system or Satellite system.
- 28. VIDEO OUT jack**– Connect to the video input jack of your video camera or another VCR.
- 29. VIDEO IN jack**– Connect to the video output jack of your video camera or another VCR.
- 30. CH3/CH4 selector switch**– Use to select a video output channel (3 or 4) for VCR playback.
- 31. ANT. OUT terminal**– Connects to the antenna input terminal on your TV.

## INSTALLING THE BATTERIES

- 1) Open the battery compartment cover by pressing the cover on the remote unit in the direction of the arrow.
- 2) Insert 2 "AA" penlight batteries into the battery compartment in the direction indicated by the polarity (+/-) markings.
- 3) Replace the cover.



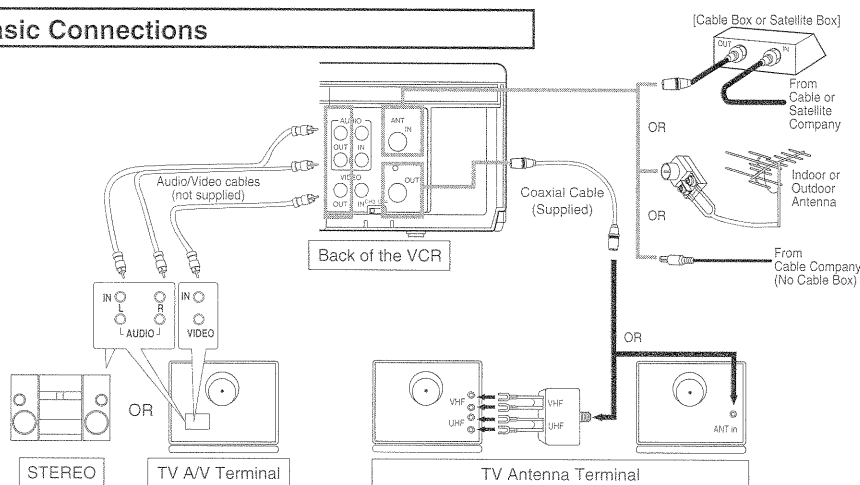
# PREPARATION FOR USE

## ANTENNA/CABLE CONNECTIONS

For some of the most common types of connections, please refer to the diagram below. Use only one connection. For any further complex connections, please contact your local dealer. (You may need additional accessories which are not supplied).

- 1 Disconnect the antenna or cable from your TV.
- 2 Connect the antenna or cable to the ANT.IN (Top jack) of your VCR.
- 3 Connect one end of the coaxial cable (supplied) to the ANT.OUT (Bottom jack) of your VCR.
- 4 Connect the other end of the coaxial cable (supplied) to the UHF/VHF antenna jack of your TV.

### Basic Connections



### Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

### USING OPTIONAL AUDIO/VIDEO OUTPUT JACKS

If your TV has A/V input jacks, you may connect your VCR's AUDIO/VIDEO OUTPUT jacks to the audio/video input jacks on back of your TV.

Direct audio/video connections usually result in a better picture and sound quality for tape playback. Please see your TV's owner's manual for A/V input connections.

### USING AUDIO/VIDEO INPUT JACKS

You can use the A/V input jacks on the front or the back of the VCR.

- 1) When you connect the external source to input jacks on the back of the VCR, select "L1" position for recording by pressing the 0, 0, 1 on the remote control or CHANNEL Up/Down button.
- 2) When you connect the external source to input jacks on the front of the VCR, select "L2" position for recording by pressing the 0, 0, 2 on the remote control or CHANNEL Up/Down button.

**Note:** "L1" or "L2" is found before the lowest memorized channel. (Example: CH2)

## SETTING THE CH3/CH4 SWITCH

*If your TV does not have A/V terminals:*

When the VCR is in the Playback mode or when the VCR is in the VCR position, your TV will receive signals from the VCR on either channel 3 or 4. To use the VCR with your TV, set the selector switch to CH3 or CH4 (which is located in the back of your VCR), whichever is not used for normal broadcasts in your area. Then set your TV to the same channel.



[Back of the VCR]



# VIDEO CASSETTE TAPE INFORMATION

This VCR will operate with any cassette that has the **VHS** mark. For best results, we recommend the use of high-quality tapes. Do not use poor quality or damaged tapes.

## PRECAUTIONS

- Avoid moisture. Moisture condensation may occur on the tape if it is moved from a cold place to a warm place or visa versa. Before using a tape with these conditions, to avoid damage of the tape and your VCR, wait until the tape has warmed to room temperature and the moisture has evaporated.
- Avoid extreme heat, high humidity and magnetic fields.
- Do not tamper with the cassette mechanism.
- Do not touch the tape with your fingers.

## TWO DIFFERENT TAPE SPEEDS

Before recording, select the tape speed from : **SP mode** (Standard Play) or **SLP mode** (Super Long Play).

The table below shows the maximum recording/playback time using T60, T120 or T160 tapes in each mode.

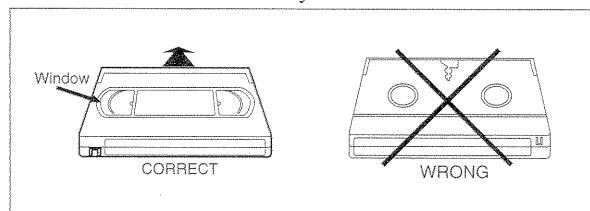
Tape Speed		Recording/Playback Time		
	Type of tape	T60	T120	T160
SP mode		1 hour	2 hours	2-2/3 hours
SLP mode		3 hours	6 hours	8 hours

**Note:** You can play back a tape recorded in LP mode (Long Play).

## INSERTING A CASSETTE

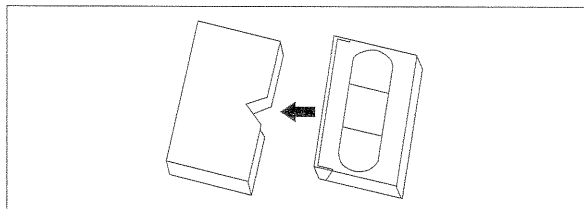
Insert the cassette in the direction as shown. Push in gently, but continuously, on the center-back of the cassette until it is drawn into the VCR.

The VCR will automatically turn on.



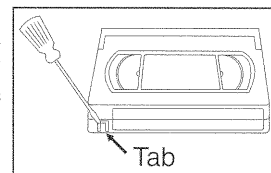
## REMOVING A CASSETTE

- 1) In the Stop mode, press the STOP/EJECT button on the VCR. The cassette will be ejected.
- 2) Pull the cassette out of the cassette compartment.
- 3) Store the cassette in its case as shown.

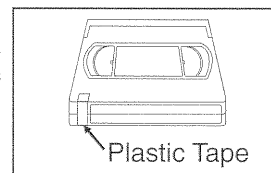


## ERASE PREVENTION

You can prevent accidental erasing of a recording by breaking off the tab on the back edge of the cassette.



If you decide to record on the tape again, cover the hole with plastic tape.



## SET UP FOR USE

You can program the tuner to scan only the channels you receive in your area. You must use the remote control for this procedure.

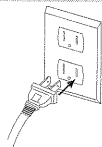
### NOTES:

- Channel memory programming is **NOT** needed when you connected the VCR to a cable box or satellite box as in "Basic connections" on page 8. In this case, select the VCR and TV to channel 3 or 4 the same channel as the CH3 or CH4 switch on the back of the VCR. Then, the channel you want to record or view may be selected at the cable box or satellite box.
- Follow the steps below once. Repeat it only if there is a power failure or if the VCR is unplugged for more than 30 seconds. (In these cases, the programmed channels are erased.)
- You must follow the steps below before attempting to play or record a video tape. If you want to play or record a video tape **BEFORE** programming the tuner, you must first turn off the VCR. Then, press the POWER button again to turn it back on. To program the tuner again, see "CHANNEL SET UP AGAIN" on page 15.

## CHANNEL SET UP (Automatic)

### 1 Plug in the VCR power cord

Plug the VCR power cord into a standard AC outlet. The "- : - -" indicator flashes on the display.

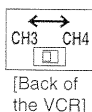


- Whenever the AC plug is connected, the VCR search the local PBS (Public Broadcasting Station) channel for auto clock setting. If the VCR find the local PBS channel, current time appears on the display.

**Remember:** If your cable box or satellite box is connected as in "Basic connections" on page 8, you DO NOT have to set up the channels. Just select the TV and VCR to channel 3 or 4 and also have the CH3/CH4 switch on the back of the VCR to match the channel you selected (CH 3 or CH 4). Now select the Box to the channel you wish to view or record.

### 2 Select channel 3 or 4 on the TV

Turn on the TV and set the TV to channel 3 or 4. Now set the CH3/CH4 switch on the back of the VCR to match the channel selected on the TV.



### 3 Turn on the VCR

Press the POWER button to turn on the VCR. Both the "PWR." indicator and the "VCR" indicator on the display come on.

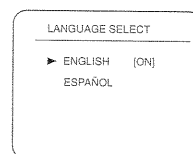
- Use the remote control for this procedure.



### 4 Select "ENGLISH" or "ESPAÑOL"

Select "ENGLISH" or "ESPAÑOL"=Spanish by using the PLAY/▲ or STOP/▼ button.

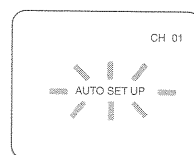
Then, press the F.FWD/► button.



**Note:** This function effects only the language on the screen menu and not the audio source.

### 5 Begin channel preset

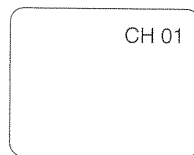
Press the F.FWD/► button once. The tuner scans and memorizes all active channels in your area.



- The VCR distinguishes between standard TV channels and cable channels.

### 6 After scanning

The tuner stops on the lowest memorized channel. The TV screen returns to TV mode.



- If "AUTO SET UP" appears on the TV screen again, check the cable connections. Press the F.FWD/► button once again and the VCR will begin preset again.
- If the VCR cannot find the local PBS channel at step 1, after scanning channels, "AUTO CLOCK" flashes on the TV screen. And the VCR search the local PBS channel for auto clock setting again. When the clock is not set yet, press the POWER button to turn on the VCR, then press the number buttons or CHANNEL (CH) ▲/▼ button to select your local PBS channel. The current time may appear on the display. If current time does not appear, follow "MANUAL CLOCK SETTING" on page 13.

**Note:** The VCR will search through all the available channels from the lowest channel. It must scan each channel for 10 seconds to determine if that channel is transmitting the EDS (Extended Data Service) signal. If the highest channel has EDS signal, it takes many times. To cancel this search, press the RE-SET/EXIT button.

- If you want to use DAYLIGHT-SAVINGS TIME feature when current time appears, follow "DAYLIGHT-SAVINGS TIME" on page 14.

## TO SELECT A DESIRED CHANNEL

You can select the desired channel by using the CHANNEL(CH) ▲ or ▼ button or directly pressing the number buttons on the remote control.

### Note for using the number buttons:


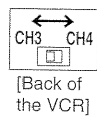
- When selecting cable channels which are higher than 99, press the +100 button first, then press the last two digits. (Example: to select channel 125, first press the +100 button then press "2" and "5").
- You must precede single-digit channel numbers with a zero (For example: 02, 03, 04 and so on).

## CLOCK SET UP

Set the clock accurately for proper automatic timer recording.

- If the Public Broadcasting Station (PBS) is available in your area, the VCR set the clock automatically by using it at "CHANNEL SET UP" on page 10. (Auto Clock Setting feature)  
Once the clock is set by this feature, the VCR will get automatically the current time from your local PBS channel, using a new service called Extended Data Service (EDS) whenever turning the VCR off, at 12:00AM and 12:00PM. If the clock's time is incorrect for some reason or you want to reset the clock immediately, following "AUTO CLOCK SETTING".
- If you want to set the clock manually, follow "MANUAL CLOCK SETTING" on page 13.
- If you want to use DAYLIGHT-SAVINGS TIME feature, follow "DAYLIGHT-SAVINGS TIME" on page 14.

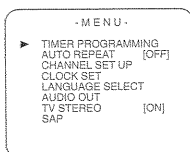
## AUTO CLOCK SETTING

- Confirm that the antenna connections are correct and the CHANNEL PRESET completes first.
- **Use the remote control for this procedure.** 
- Be sure to check that the "PWR." and the "VCR" indicators are both on.
- Turn on the TV and set the TV to channel 3 or 4. Now set the CH3/CH4 switch on the back of the VCR to match the channel selected on the TV. 
- If the VCR is connected directly to a cable converter box, the cable converter box must turn on and select the local PBS channel itself. Then, the VCR must be set to the output channel of the cable converter box (usually channel 3 or 4), to be able to set up and automatically correct the clock.

## 1 Select main menu

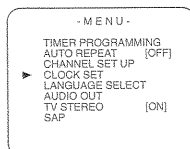
Press the MENU button.

- If the clock is not set yet, CLOCK SET menu appears immediately when you press the MENU button. In this case, go to step [3].



## 2 Select "CLOCK SET"

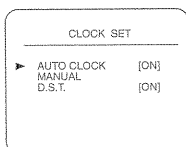
Press the PLAY/▲ or STOP/▼ button to point to "CLOCK SET". Then, press the F.FWD/▶ button.



## 3 Select "AUTO CLOCK"

If [ON] appears beside "AUTO CLOCK", press the F.FWD/▶ button.

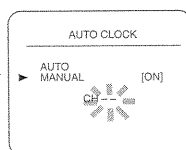
- If it is not, press the PLAY/▲ or STOP/▼ button to point to "AUTO CLOCK". Then, press the F.FWD/▶ button twice.



## 4 Select the PBS channel

First, press the PLAY/▲ or STOP/▼ button to point to "MANUAL". Then, press the F.FWD/▶ button.

Next, press the number buttons or PLAY/▲ or STOP/▼ button to select the PBS channel.



- If you leave it set to "AUTO" when the clock is not set yet, the VCR read your local PBS channel once time every 10 minutes until the VCR get the current time.

## 5 The VCR begin to get the current time

Press the F.FWD/▶ button. "AUTO CLOCK" flashes on the TV screen. After a few minutes, flashing stops and current time appears on the display.

### NOTE:


- When your local PBS channel is incorrect or is not received, the clock cannot be set automatically. In this case, follow "MANUAL CLOCK SETTING" on page 13.

## MANUAL CLOCK SETTING

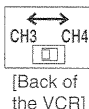
We suggest that you use a TV or radio station as your time source.

In the example below, the clock is to be set to:

DATE 19th March, 2001  
SETTING TIME 5:40PM

- Use the remote control for this procedure. 
- Be sure to check that the "PWR." and the "VCR" indicators are both on.

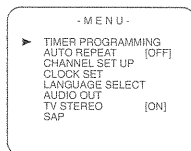
- Turn on the TV and set the TV to channel 3 or 4. Now set the CH3/CH4 switch on the back of the VCR to match the channel selected on the TV.



### 1 Select main menu

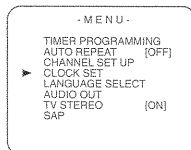
Press the MENU button.

- If the clock is not set yet, CLOCK SET menu appears immediately when you press the MENU button. In this case, go to step [3].



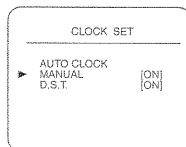
### 2 Select "CLOCK SET"

Press the PLAY/▲ or STOP/▼ button to point to "CLOCK SET". Then, press the F.FWD/▶ button.



### 3 Select "MANUAL"

If [ON] appears beside "MANUAL", press the F.FWD/▶ button.



- If it is not, press the PLAY/▲ or STOP/▼ button to point to "MANUAL". Then, press the F.FWD/▶ button twice.

## 4 Set the clock

### Set the month

Press the PLAY/▲ or STOP/▼ button repeatedly. Then, press the F.FWD/▶ button. (Ex.: 03)

### Set the day

Press the PLAY/▲ or STOP/▼ button repeatedly. Then, press the F.FWD/▶ button. (Ex.: 19)

### Set the year

Press the PLAY/▲ or STOP/▼ button repeatedly. Then, press the F.FWD/▶ button. (Ex.: 2001)

The day of the week will appear automatically.

### Set the hour

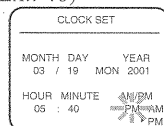
Press the PLAY/▲ or STOP/▼ button repeatedly. Then, press the F.FWD/▶ button. (Ex.: 05)

### Set the minute

Press the PLAY/▲ or STOP/▼ button repeatedly. Then, press the F.FWD/▶ button. (Ex.: 40)

### Set the AM or PM

Press the PLAY/▲ or STOP/▼ button repeatedly. (Ex.: PM)



- To go back one step, press the REW/◀ button.

## 5 Start the clock

Press the RESET/EXIT or F.FWD/▶ button after setting the AM or PM.

Although seconds are not displayed, they begin counting from 00 when you press the RESET/EXIT or F.FWD/▶ button. Use this feature to synchronize the clock with the correct time.

- When unplugging the AC-cord or if there is a power failure for more than 30 seconds, you may have to reset the clock.
- If the display shows an abnormal reading or no reading, unplug the power cord for more than 30 seconds. Then plug it back in and reset clock.

## DAYLIGHT-SAVINGS TIME

Select this feature and the VCR's clock automatically will advance one hour in April, then reverse one hour in October. Follow the steps below when you want to use this feature even if you set the AUTO CLOCK to ON.


When Daylight-Savings Time is ON, the clock's time will change automatically as follows:

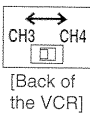
**First Sunday of April : from 2:00AM to 3:00AM**

**Last Sunday of October : from 2:00AM to 1:00AM**

### NOTES:

- When programmed timer recordings start between 2:00AM - 2:59AM on the First Sunday of April, the VCR will start recording at 3:00AM.
- When programmed timer recordings end between 2:00AM - 2:59AM on the First Sunday of April, the VCR will stop recording at 3:00AM.

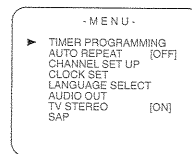
- **Use the remote control for this procedure.** 
- Be sure to check that the "PWR." and the "VCR" indicators are both on.
- Turn on the TV and set the TV to channel 3 or 4. Now set the CH3/CH4 switch on the back of the VCR to match the channel selected on the TV.



### 1 Select main menu

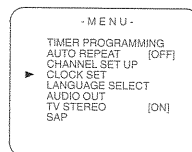
Press the MENU button.

- If the clock is not set yet, CLOCK SET menu appears immediately when you press the MENU button. In this case, go to step [3].



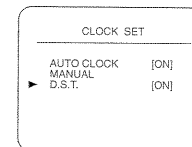
### 2 Select "CLOCK SET"

Press the PLAY/▲ or STOP/▼ button to point to "CLOCK SET". Then, press the F.FWD/▶ button.



### 3 Set "D.S.T." (Daylight-Savings Time) to [ON]

Press the PLAY/▲ or STOP/▼ button to point to "D.S.T.". Then, press the F.FWD/▶ button so that [ON] appears.



### 4 To return to TV mode


Press the RESET/EXIT button.

## TO CANCEL THE DAYLIGHT-SAVINGS TIME

Repeat steps [1] to [3]. Then, press the F.FWD/▶ button so that [OFF] appears on the menu. Press the RESET/EXIT button to return to TV mode.

## TO DELETE OR ADD CHANNELS

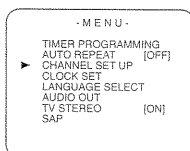
The channels you no longer receive or seldom watch can be deleted from the memory. (Of course, you can later add the deleted channel into the memory again.)

- Use the remote control for this procedure. 
- Be sure to check that the "PWR." and the "VCR" indicators are both on.
- Turn on the TV and set the TV to channel 3 or 4. Now set the CH3/CH4 switch on the back of the VCR to match the channel selected on the TV.



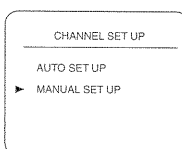
### 1 Select main menu

Press the MENU button.



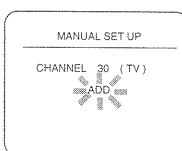
### 2 Select "CHANNEL SET UP"

Press the PLAY/▲ or STOP/▼ button to point to "CHANNEL SET UP". Then, press the F.FWD/▶ button.



### 4 Enter the desired channel number

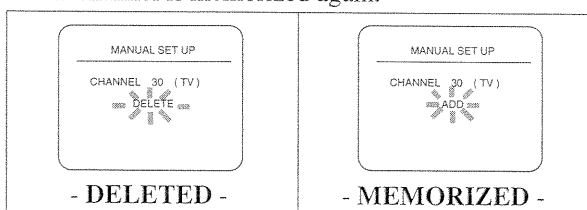
Press the PLAY/▲ or STOP/▼ button until your desired channel number appears. (Example: CH30)



### 5 Delete it from memory

Press the F.FWD/▶ or REW/◀ button so that "DELETE" flashes on the TV screen.

- To delete another channel, repeat steps [4] and [5].
- If you press the F.FWD/▶ or REW/◀ button again, the channel is memorized again.




## 6 Exit the preset mode

Press the RESET/EXIT button to return to TV mode.

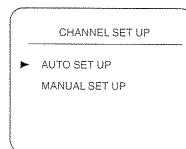
**NOTE:** To confirm that channel(s) has been deleted or added, press the CHANNEL(CH) ▲ or ▼ button.

## CHANNEL SET UP AGAIN

- Channel memory programming is **NOT needed** when you connected the VCR to a cable box or satellite box as in "Basic connections" on page 8. In this case, select the VCR and TV to channel 3 or 4 the same channel as the CH3 or CH4 switch on the back of the VCR. Then, the channel you want to record or view may be selected at the cable box or satellite box.

- Use the remote control for this procedure. 


- 1) Press the MENU button.
- 2) Press the PLAY/▲ or STOP/▼ button to point to "CHANNEL SET UP". Then, press the F.FWD/▶ button.
- 3) Confirm "AUTO SET UP" is pointed to, then press the F.FWD/▶ button. After scanning, the tuner stops at the lowest memorized channel.
- The VCR distinguishes between standard TV channels and cable channels.



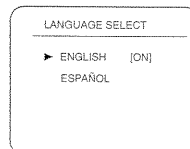
## SELECTING THE LANGUAGE

If you want to change the language on the TV screen, follow the steps below:

**Note:** This function effects only the language on the screen menu and not the audio source.

- Use the remote control for this procedure. 

- 1) Press the MENU button.
- 2) Press the PLAY/▲ or STOP/▼ button to point to "LANGUAGE SELECT". Then, press the F.FWD/▶ button.
- 3) Select "ENGLISH" or "ESPAÑOL"= Spanish by using the PLAY/▲ or STOP/▼ button.
- 4) Press the RESET/EXIT button to return to TV mode.

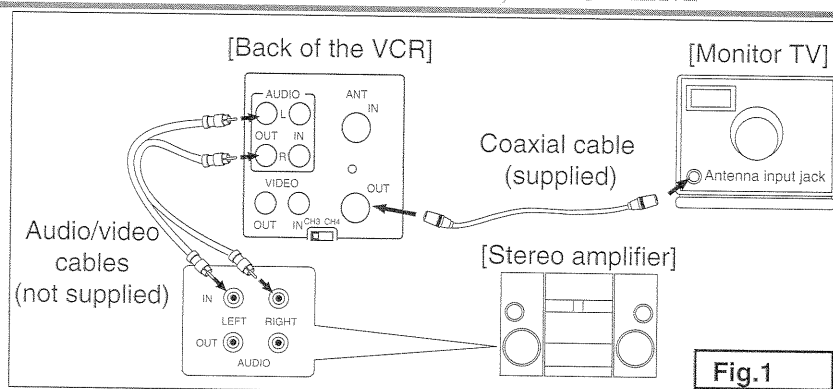


**NOTE:** If for some reason the menu is in Spanish, press the MENU button until the main menu appears, press the PLAY/▲ button to point to "SELEC. IDIOMA", press the F.FWD/▶ button, press the PLAY/▲ button to point to "ENGLISH", then press the RESET/EXIT button.

# MTS (Multi-Channel Television Sound) SYSTEM

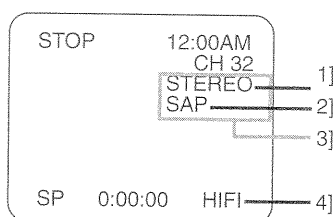
You can record or listen to a program in MTS stereo, by using a stereo amplifier and speakers.

Connect your VCR to your stereo amplifier using the following diagram.



## CHECKING THE SELECTED MTS MODE

When you play a VHS tape, or receive a broadcast on the VCR tuner channel you are watching, the status shown below will appear when you press the DISPLAY button on the remote control.



- 1] When a program is broadcast in stereo, STEREO appears on the TV screen.
- 2] When a program is broadcast in second audio, SAP appears on the TV screen.
- 3] When a program broadcast both in stereo and second audio, STEREO and SAP appear on the TV screen.

**NOTE:** Although a program may be broadcast in both stereo and second audio, you cannot record in both stereo and second audio at the same time.

- 4] While the VCR is set in HIFI stereo mode, HIFI appears on the TV screen. While the VCR is set in monaural(MONO) mode, HIFI disappears from the TV screen.

**NOTE:** If you play non-HIFI tapes while the VCR is set in HIFI, HIFI will disappear from the TV screen and the VCR will play automatically in monaural.

SAP	Second Audio Program, which means your program, can also be received in a second language or sometimes a radio station.
HIFI	High Fidelity which produces better sound than standard stereo VCRs.

## MTS RECORDING/MONITOR MODE

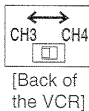
Type of broadcast	Display on the TV screen	STEREO/SAP SELECTION	Hi-Fi audio track (2-channel)		Normal audio track
			L-channel	R-channel	
Regular (monaural audio)	-None-	-Invalid-	Mono	Mono	Mono
Stereo broadcast	STEREO	-Invalid-	L	R	L + R
Bilingual broadcast	SAP	TV STEREO*	Main audio program	Main audio program	Main audio program
		SAP*	Sub audio program	Sub audio program	Sub audio program
Stereo & Bilingual broadcast	STEREO SAP	TV STEREO*	L	R	L + R
		SAP*	Sub audio program	Sub audio program	Sub audio program

\* You must select the recording mode in TV STEREO or SAP when you record a broadcast. Refer to "TO SELECT STEREO OR SAP MODE" on the next page.



## SELECTING THE MTS SYSTEM

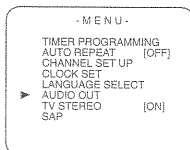
- Be sure to check that the "PWR." and the "VCR" indicators are both on.
- Turn on the TV and set the TV to channel 3 or 4. Now set the CH3/CH4 switch on the back of the VCR to match the channel selected on the TV.



### TO SELECT HIFI MODE

#### 1 Select main menu

Press the MENU button.

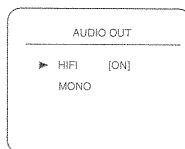


#### 2 Select "AUDIO OUT"

Press the PLAY/▲ or STOP/▼ button to point to "AUDIO OUT". Then, press the F.FWD/► button.

#### 3 Select "HIFI"

Press the PLAY/▲ or STOP/▼ button to point to "HIFI".



#### 4 To return to TV mode

Press the RESET/EXIT button.

#### NOTES:

- Normally, "HIFI" should be selected for playback with HIFI sound.
- When you play non-HIFI tapes, the VCR will play automatically in the monaural mode.
- The VCR records automatically MTS broadcasts in HIFI stereo sound unless you select SAP mode recording before you begin recording.

### TO SELECT MONO MODE

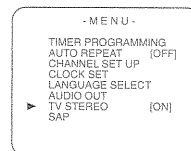
You can change the selection to "MONO" if you want to listen to HIFI tapes in normal audio playback.

- 1) Press the MENU button.
- 2) Press the PLAY/▲ or STOP/▼ button to point to "AUDIO OUT". Then, press the F.FWD/► button.
- 3) Press the PLAY/▲ or STOP/▼ button to point to "MONO".
- 4) Press the RESET/EXIT button to return to TV mode.

### TO SELECT STEREO OR SAP MODE

#### 1 Select main menu

Press the MENU button.



#### 2 Select "TV STEREO" or "SAP"

Press the PLAY/▲ or STOP/▼ button to point to "TV STEREO" or "SAP" (depending which one you would prefer to select).

Then, press the F.FWD/► button.

#### 3 To return to TV mode

Press the RESET/EXIT button.

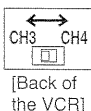
#### NOTES:

- You must select the recording mode, either TV STEREO or SAP when you record a broadcast. Refer to "MTS RECORDING/MONITOR MODE" on previous page.
- When you play the tape on the VCR later, it will be in stereo or SAP.
- If you select second audio when second audio is not available, the VCR will record normal audio.

# PLAYBACK

## NORMAL PLAYBACK

- Be sure to check that the "PWR." and the "VCR" indicators are both on.
- Turn on the TV and set the TV to channel 3 or 4. Now set the CH3/CH4 switch on the back of the VCR to match the channel selected on the TV.



### 1 Insert a prerecorded tape

Counter mode appears at 0:00:00 on the TV screen. If the erase-protection tab has been removed, the VCR will start playback automatically.

### 2 To begin playback

Press the PLAY button.



**NOTE:** If any menu is activated on the TV screen, the PLAY button on the remote control does not function. Press the RESET/EXIT button to clear the menu. Then, press the PLAY button.

### *If a tape is already in the VCR with power off*

Press the POWER button to turn on the VCR, and then press the PLAY button.

### 3 To stop playback

Press the STOP button.

## PICTURE SEARCH

This feature is very useful in finding or skipping over a particular scene on a tape. In this mode, the sound will be muted.

- 1) You may view a video tape at a high speed in either a forward or reverse direction by pressing the F.FWD or REW button. (in the SP / LP / SLP modes)
- 2) Press it again and the VCR will now search in super high speed. (in the LP / SLP modes only)
- 3) Press the PLAY button to return to normal speed.

## STILL PICTURE

You can view a still picture on the TV screen during playback (the Still mode). Press the PAUSE button on the remote control during playback. Press the PLAY button to return to playback.

- You can advance the picture by one frame at a time by pressing the PAUSE button on the remote control during the still mode.
- If it is left in the Still mode for more than five minutes, the VCR will automatically switch to the Stop mode.

## VERTICAL HOLD CONTROL

In the Pause/Still mode only, if the picture begins to vibrate vertically, stabilize the picture by pressing the CHANNEL(CH) ▲ or ▼ button.

### NOTES:

- If the picture is distorted or rolling vertically, adjust the vertical hold control on your TV, if equipped.
- Most newer TV's do not have a user adjustable vertical hold control.

## TRACKING ADJUSTMENT

- Tracking adjustment will be set automatically (Digital Tracking function) when you start playback. However when playing pre-recorded tapes or tapes recorded on units other than your own, noise lines (black and white streaks) may appear on the playback picture. If this occurs, you can adjust the tracking control manually by pressing the CHANNEL ▲ or ▼ button **on the VCR** until the streaks disappear.

To return to the DTR function, stop the tape once and start playback again.

- You can reduce the noise lines by pressing the CHANNEL(CH) ▲ or ▼ button in slow mode, too. Slow tracking adjustment will not be set automatically.

**NOTE:** In Still mode, press the SLOW button on the remote control and press the CHANNEL(CH) ▲ or ▼ button until the streaks disappear. To return to Still mode, press the PAUSE button on the remote control again.

## SLOW MOTION

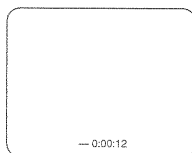
Press the SLOW button on the remote control to reduce the playback speed. The VCR mutes the sound during slow motion.

Press the PLAY button to return to normal playback.

**NOTE:** If it is left in the Slow mode for more than five minutes, the VCR will automatically switch to the Stop mode.

## REAL TIME TAPE COUNTER

- This shows the elapsed recording or playback time in hours, minutes, and seconds. (The displayed time will not change during blank portions on the tape.)
- The "--" indication will appear when the tape is rewound further than "0:00:00" on the tape counter.





## AUTO REWIND

When the end of a tape is reached during recording, playback, or fast-forward, the tape will automatically rewind to the beginning. After rewinding finishes, the VCR will eject the tape and turn itself to off.

- The tape will not auto-rewind during timer recording or Instant Recording Timer.
- When the Counter Memory is activated, the tape will rewind to the M0:00:00 and the VCR will go into the Stop mode.

## COUNTER MEMORY

Use this feature to memorize the beginning point that you want to return to. And you can search it easily by rewinding or fast forwarding.

- **Use the remote control for this procedure.** 
- Be sure to check that the "PWR." and the "VCR" indicators are both on.
- Turn on the TV and set the TV to channel 3 or 4. Now set the CH3/CH4 switch on the back of the VCR to match the channel selected on the TV.   
[Back of the VCR]
- This feature only works with a prerecorded tape.

### 1 Stop tape at your desired point

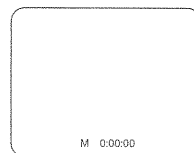
Insert a prerecorded tape. Rewind or fast forward the tape to the beginning point at which you want to mark.

### 2 Reset the counter to 0:00:00

Press the COUNTER RESET button on the remote control. If necessary press the COUNTER RESET button again to reset the counter to 0:00:00.

### 3 Select the Counter Memory mode

Press the COUNTER MEMORY button on the remote control until "M" appears on the TV screen.



- The COUNTER MEMORY button does not function if the Auto Repeat mode is set to [ON]. In this case, set the Auto Repeat mode to [OFF].

### 4 Begin recording or playback

Press the REC or PLAY button.

Press the STOP button when recording or playback is completed.

### 5 To activate the Counter Memory

Press the REW (or F.FWD) button, the VCR will stop automatically when the counter has returned to approximately 0:00:00.

**NOTE:** The displayed time will not change during blank portions on the tape.

## TO EXIT THE COUNTER MEMORY

Press the COUNTER MEMORY button on the remote control so that "M" *disappears* from the TV screen.

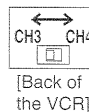
On more information concerning the on screen display, please refer to page 7.

## SPECIAL PLAYBACK

- Use the remote control for the following procedure.
- Be sure to check that the "PWR." and the "VCR" indicators are both on.



- Turn on the TV and set the TV to channel 3 or 4. Now set the CH3/CH4 switch on the back of the VCR to match the channel selected on the TV.



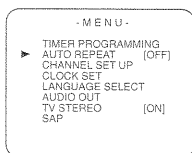
### AUTO REPEAT PLAYBACK

The VCR has the auto repeat function that allows you to repeat a tape indefinitely without touching the PLAY button.

Make sure to insert a prerecorded tape.

#### 1 Select main menu

Press the MENU button.



#### 2 Select "AUTO REPEAT"

Press the PLAY/▲ or STOP/▼ button to point to "AUTO REPEAT".

#### 3 Begin Auto repeat playback

Press the F.FWD/▶ button so that [ON] will appear next to "AUTO REPEAT" on the TV screen.

When in Stop mode, Repeat playback mode will start automatically.

If the on-screen menu still remains, press the RESET/EXIT button to exit the menu.

- Once you select the Auto Repeat mode, it stays in effect even after you turn off the VCR.
- The COUNTER MEMORY button does not function if the Auto Repeat mode is set to [ON]. In this case, set the Auto Repeat mode to [OFF].
- To stop playback, press the STOP button.

### TO EXIT THE AUTO REPEAT MODE

Repeat steps [1] to [2], and press the F.FWD/▶ button. [OFF] will then appear on the menu. Then, press the RESET/EXIT button to return to TV mode.

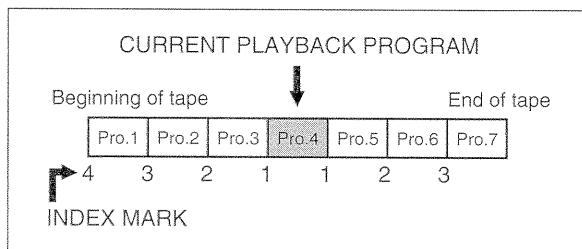
**Power failure:** If there is a power failure for more than 30 seconds, Auto Repeat Playback will go to off.

### INDEX SEARCH

This feature provides a method of indexing a recordings starting point so that it can be easily returned to in either fast forward or rewind mode.

- The index mark will be made automatically when the REC button is pressed. It will also be marked at the starting point of Timer recording and IRT.
- The index mark will not be recorded if the PAUSE button on the remote control is pressed and released during recording.
- The time gap between making the index marks on the tape should be greater than 1 minute for SP recording, 2 minutes for LP recording and 3 minutes for SLP recording.
- In some cases, the index mark at the beginning of video tape cannot be detected.

**Example:** You are watching program number 4 and want to fast forward to program number 7. You must skip three programs.



#### 1 Select "INDEX SEARCH" mode

Press the SEARCH MODE button on the remote control so that the "INDEX SEARCH" appears on the TV screen.

#### 2 Enter your desired number

Press the PLAY/▲ or STOP/▼ button until the number of programs that you want to skip appears.

(Example: "03" for 3 programs)



- The Index Search mode will be cancelled if the procedures are not activated in 30 seconds.

### 3 Begin Index Search

Press the REW or F.FWD button. The VCR begins re-winding or fast forwarding to the beginning of desired program.

**NOTE:** Every time an index signal is skipped, the number in the program indicator decreases by one.

### 4 After Index Search

When the preset program is reached, the VCR will start playback automatically.

- A video cassette must be inserted in the VCR for this function to work.
- The number of Index Searches can be set up to 20.
- This function will not operate in the recording mode.
- When you want to cancel the Index Search while in progress, press the STOP button.

## TIME SEARCH

The Time Search function makes it possible to quickly advance the tape to your desired position simply by entering the exact amount of playback time you want to skip.

**Example:** To watch a program after 2 hours and 50 minutes from the present position, in either direction.

### 1 Select "TIME SEARCH" mode

Press the SEARCH MODE button on the remote control so that the "TIME SEARCH" appears on the TV screen.

### 2 Enter your desired time

Press the PLAY/▲ or STOP/▼ button until your desired time appears. ("2:50" stands for 2 hours 50 minutes)



- The Time Search mode will be cancelled if the procedures are not activated in 30 seconds.

### 3 Begin Time Search

By pressing the REW or F.FWD button, the VCR will rewind or fast forward to the specified point.

The time counts down as the searching progresses.

### 4 After Time Search

Playback starts automatically when 0:00 is reached.

- A video cassette must be inserted in the VCR for this function to work.
- Time Search can be set up to a maximum of 9 hours 59 minutes (9:59).
- This function will not operate in the recording mode.
- When you want to cancel the Time Search while in progress, press the STOP button.

# RECORDING

- Be sure to check that the "PWR." and the "VCR" indicators are both on.
- Turn on the TV and set the TV to channel 3 or 4. Now set the CH3/CH4 switch on the back of the VCR to match the channel selected on the TV.
- Insert a cassette tape with its erase prevention tab in place. (If necessary, rewind or fast forward the tape to the point at which you want to begin recording.)
- You must select the recording mode in TV STEREO or SAP when you record a broadcast. Refer to "SELECTING THE MTS SYSTEM" on page 17.
- If you connected the VCR to a cable box or satellite box as in "Basic connections" on page 8, select the VCR to channel 3 or 4 the same channel as the CH3 or CH4 switch on the back of the VCR. Then, select the channel you want to record at the cable box or satellite box. In this case, you can ONLY record and view the SAME channel.

## VIEWING AND RECORDING THE SAME PROGRAM

### 1 Select the channel to be recorded

Press the number buttons on the remote control or the CHANNEL(CH) ▼ or ▲ button.

CH 32

### 2 Select the tape speed

Press the TAPE SPEED button on the remote control to select the desired tape speed (SP/SLP).

SP

### 3 Begin recording

Press the REC button. The "REC" indicator appears on the display.

REC

SP

**NOTE:** If any menu is activated on the TV screen, the REC button on the remote control does not function. Press the RESET/EXIT button to clear the menu. Then, press the REC button.

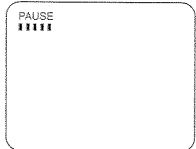
### 4 Stop recording

Press the STOP button when recording is completed.

## SKIPPING UNWANTED SCENES DURING RECORDING

Press the PAUSE button on the remote control to temporarily stop recording.

Press the PAUSE or REC button to resume recording.



**NOTE:** When the VCR is in the Pause mode, you may view the pause time remaining with ■ marks on the TV screen. Each ■ mark represents one minute. After five minutes, the VCR will automatically switch to the Stop mode to prevent tape damage. When there is 1 minute remaining, one ■ will flash.

## RECORDING ONE PROGRAM AND VIEWING ANOTHER

You can record one program while viewing another. To start recording, follow steps [1] to [3] under "VIEWING AND RECORDING THE SAME PROGRAM".

To select the channel you want to view at the TV, follow the steps below.

### 4 Select the TV mode

Press the VCR/TV button on the remote control so that the "VCR" indicator on the display *disappears*.

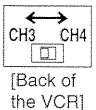
### 5 Select the channel on the TV

Set the TV to the channel you want to watch.

## TO MONITOR THE PROGRESS OF YOUR RECORDING

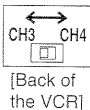
1) Press the VCR/TV button on the remote control so that the "VCR" indicator on the display comes on.

2) Turn on the TV and set the TV to channel 3 or 4. Now set the CH3/CH4 switch on the back of the VCR to match the channel selected on the TV.



## IRT (Instant Recording Timer)

This function enables you to set the recording length simply by pressing the REC/IRT button on the VCR.

- You cannot use the remote control for this function.
- Be sure to check that the "PWR." and the "VCR" indicators are both on.
- Turn on the TV and set the TV to channel 3 or 4. Now set the CH3/CH4 switch on the back of the VCR to match the channel selected on the TV. 
- Insert a cassette tape with its erase prevention tab in place. (If necessary, rewind or fast forward the tape to the point at which you want to begin recording.)
- If you connected the VCR to a cable box or satellite box as in "Basic connections" on page 8, select the VCR to channel 3 or 4 the same channel as the CH3 or CH4 switch on the back of the VCR. Then, select the channel you want to record at the cable box or satellite box. In this case, you can ONLY record and view the SAME channel.

PUSH(ES)	DISPLAY	RECORDED LENGTH
1 push	<i>(normal recording)</i>	
2 pushes	0:30	30 minutes
3 pushes	1:00	60 minutes
↓	↓	↓
17 pushes	8:00	480 minutes
18 pushes	<i>(normal recording)</i>	

### 1 Select the channel to be recorded

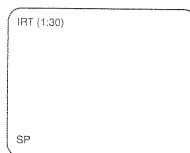
Press the number buttons on the remote control or the CHANNEL(CH) ▼ or ▲ button.

### 2 Select the tape speed

Press the TAPE SPEED button on the remote control to select the desired tape speed (SP/SLP).

### 3 Begin IRT

Press the REC/IRT button on the VCR as many times as needed. The recording length will be determined by the number of times you press the REC/IRT button.



Each additional push will increase the recording time by 30 minutes. It can be set for up to 8 hours.

- Recording starts immediately when the REC/IRT button is pressed, whether you are watching the same or a different channel.
- When the REC/IRT button is pressed 18 times, the VCR returns to the normal recording mode.
- To stop the IRT operation, press the STOP button on the VCR or on the remote control.
- To show the remaining time, press the DISPLAY button on the remote control so that "IRT" appears on the TV screen. (It will show up momentarily then disappear.)
- Recording stops when 0:00 is reached.
- Please note that in the SLP mode maximum recording time, assuming the tape is started at the beginning, is 8 hours using T-160 (or 6 hours using T-120).
- The TV that is connected to your VCR may be turned on or off during IRT.
- If the tape runs out before the end time, the VCR will switch to the Stop mode immediately, eject the tape and turn power off.


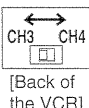
# TIMER RECORDING

## AUTOMATIC TIMER RECORDING

You may set the VCR to start and end a recording while you are away. You can set seven programs to record on specific days, daily or weekly within a 1 year period.

*In the example below, the timer is being set to record:*

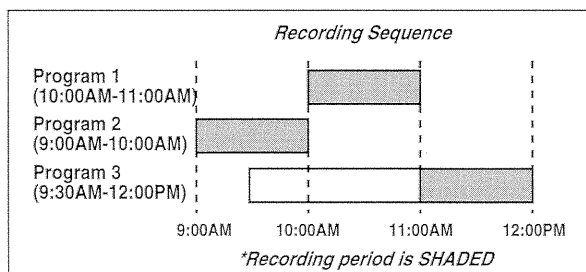
DATE: May 3rd, 2001  
 SETTING TIME: from 7:30PM to 8:30PM  
 CHANNEL: CH16  
 TAPE SPEED: SP  
 PROGRAM NO: No. 1

- Use the remote control for this procedure. 
- Be sure to check that the "PWR." and the "VCR" indicators are both on to program it.
- Turn on the TV and set the TV to channel 3 or 4. Now set the CH3/CH4 switch on the back of the VCR to match the channel selected on the TV.  [Back of the VCR]
- Clock must be set to the correct time and date before setting the timer.
- Insert a cassette tape with its erase prevention tab in place. (If necessary, rewind or fast forward the tape to the point at which you want to begin recording.)

### Avoid overlap of programs ...

There is a case that a program will not be performed. When programs overlap:

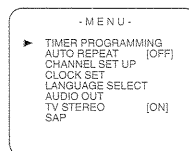
- The program with an earlier start time has priority.
- Once the earlier program finishes, the overlapping programs will begin recording in sequence.
- The illustration below demonstrates the sequence of recordings.



### 1 Select "TIMER PROGRAMMING"

First, press the MENU button.

Next, press the PLAY/▲ or STOP/▼ button to point to "TIMER PROGRAMMING". Then, press the F.FWD/▶ button.

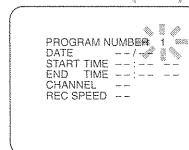


**NOTE:** If you have not yet set the clock, "CLOCK SET" appears. If so, continue with step [3] on page 12 or 13. Then, set the timer recording.

### 2 Select your desired program number (1~7)

Program number which is not set up flashes.

Press the PLAY/▲ or STOP/▼ button until your desired program number appears. (Example: 1)

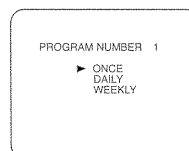


Then, press the F.FWD/▶ button.

### 3 Select once, daily or weekly recording

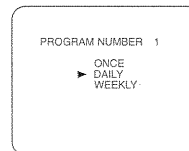
**For once recording :**

Press the PLAY/▲ or STOP/▼ button to point to "ONCE", and then press the F.FWD/▶ button.



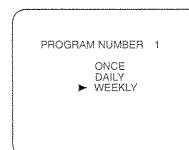
**For daily recording :** To record a TV program at the same time on the same channel from Monday through Friday.

Press the PLAY/▲ or STOP/▼ button to point to "DAILY", and then press the F.FWD/▶ button.



**For weekly recording :** To record a TV program at the same time on the same channel every week. (Example: every Monday on ch 7 at 5:00PM)

Press the PLAY/▲ or STOP/▼ button to point to "WEEKLY", and then press the F.FWD/▶ button.





#### 4 Set the timer

##### Set the date

First, press the PLAY/▲ or STOP/▼ button for the month, then, press the F.FWD/▶ button. (Ex.: 05)

Next, press the PLAY/▲ or STOP/▼ button for the day, then, press the F.FWD/▶ button. (Ex.: 03)

##### Set the start time

First, press the PLAY/▲ or STOP/▼ button for the hour, then, press the F.FWD/▶ button. (Ex.: 07)

Next, press the PLAY/▲ or STOP/▼ button for the minute, then, press the F.FWD/▶ button. (Ex.: 30)

And then, press the PLAY/▲ or STOP/▼ button for AM or PM. Then, press the F.FWD/▶ button. (Ex.: PM)

##### Set the end time

Follow the instructions of "Set the start time" to set the end time. (Ex.: 08:30 PM)

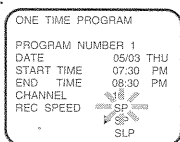
##### Set the channel number

Press the PLAY/▲ or STOP/▼ button repeatedly for the desired channel number, then, press the F.FWD/▶ button. (Ex.: 16)

**Note:** If you connected the VCR to a cable box or satellite box as in "Basic connections" on page 8, select the VCR to channel 3 or 4 the same channel as the CH3 or CH4 switch on the back of the VCR. Then, select the channel you want to record at the cable box or satellite box. Leave the cable box or satellite box on for timer recording.

##### Set the tape speed

▼ Press the PLAY/▲ or STOP/▼ button repeatedly for the desired tape speed. (Ex: SP)



- To go back one step, press the REW/◀ button.

#### 5 Finish setting the program

Press the F.FWD/▶ button after setting the tape speed. Program 1 is now completed.

- To set another program, repeat steps [2] to [5].
- Press the RESET/EXIT button to return to original mode.

#### 6 Set the timer

Press the POWER button to turn off. The "☑" indicator on the display comes on.

- Please see "HINTS FOR TIMER RECORDING" for more information.

## HINTS FOR TIMER RECORDING

- If there is a power failure or the VCR is unplugged for more than 30 seconds, the clock setting and all timer settings will be lost.
- If the tape runs out before the end time, the VCR will switch to the Stop mode immediately, eject the tape and the VCR power will be turned off. The "☑" indicator will flash.
- If a tape is not in the VCR or does not have the erase-protection tab, the "☑" indicator flashes and timer recording cannot be performed. Please insert a recordable tape.
- The TV that is connected to your VCR may be turned ON or OFF when the VCR is in the timer-record mode.

### TO STOP AN AUTOMATIC TIMER PROGRAM ALREADY STARTED

Press the STOP/EJECT button on the VCR.

**NOTE:** The STOP button on the remote control will not function in Automatic Timer Recording mode.

### TO CHECK, CORRECT, OR CANCEL AN AUTOMATIC TIMER PROGRAM

- 1) Turn the power on.
- 2) Select main menu by pressing the MENU button.
- 3) Select "TIMER PROGRAMMING" by pressing the PLAY/▲ or STOP/▼ button. Then, press the F.FWD/▶ button.
- 4) Select the program number which you want to check by pressing the PLAY/▲ or STOP/▼ button. The details of the selected program appears on the TV screen.
  - Go to the digit you want to change by pressing the F.FWD/▶ or REW/◀ button. Then, enter correct numbers by pressing the PLAY/▲ or STOP/▼ button.
  - You may cancel the entire program by pressing the REW/◀ button during the program number flashes.
- 5) Press the RESET/EXIT button to exit.
- 6) Press the POWER button to return to timer standby mode.

## COPYING A VIDEO TAPE

You can make copies of video tapes made by friends or relatives for your enjoyment.

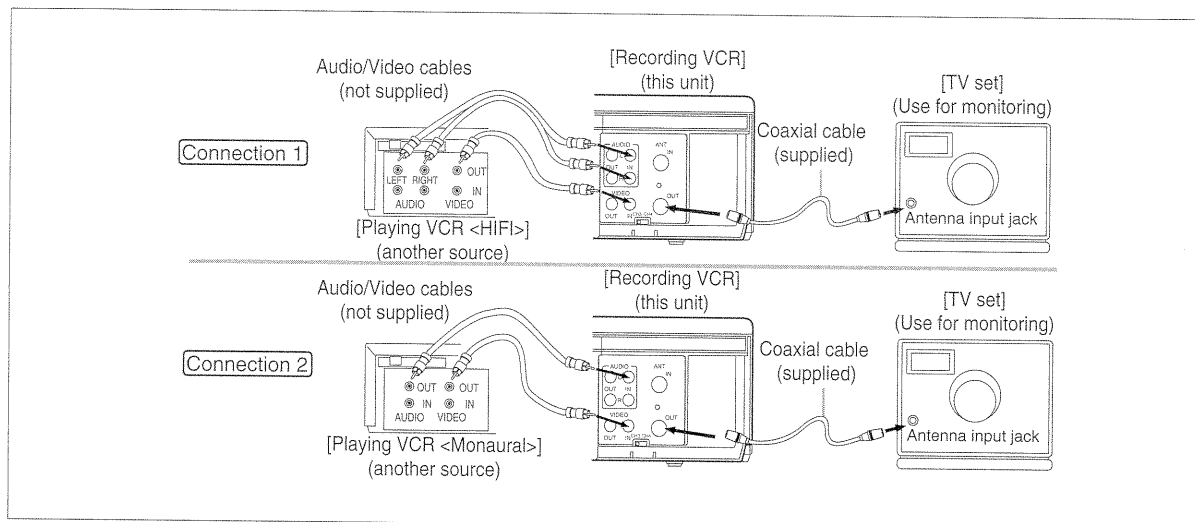
**Warning:** Unauthorized recordings of copyrighted video tapes may be an infringement of copyright laws.

Connect the recording VCR (this unit), the playing VCR (another source) and your TV using the following diagram.

### NOTES:

- You can use the audio and video input jacks on the front panel of the recording VCR instead of using the jacks on the back.
- When you connect a monaural VCR (another source) to this VCR, connect the Audio output jack of the monaural VCR (another source) to the AUDIO IN L jack of this VCR. The audio signal will be recorded in both L and R channel equally.

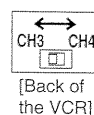
**Fig.2:**



- 1) Insert a pre-recorded video cassette into the playing VCR.
  - 2) Insert a blank video cassette, or one you want to record over, into the recording VCR cassette compartment.
  - 3) Press the TAPE SPEED button on the remote control on the recording VCR to select the desired recording speed (SP/SLP).
  - 4) Select the "L1" or "L2" position on the recording VCR. See page 8, under "Using audio/video input jacks".
  - 5) Press the REC button on the recording VCR.
  - 6) Begin playback of the tape in the playing VCR.
- For best results during dubbing, use the VCR's front panel controls whenever possible. The remote control might affect the playback VCR's operation.
  - Always use video-quality shielded cables with RCA-type connectors. Standard audio cables are not recommended.
  - You can use a video disc player, satellite receiver, or other audio/video component with A/V outputs in place of the playback VCR.
  - If video or color fades in and out you may be copying a copy guarded video tape.

### TO MONITOR THE RECORDING

- 1) Turn on the TV and set the TV to channel 3 or 4. Now set the CH3/CH4 switch on the back of the VCR to match the channel selected on the TV.
- 2) Press the VCR/TV button on the remote control on the recording VCR so that the "VCR" indicator on the display comes on.



# CONTROLLING YOUR TV OR CABLE CONVERTER WITH THE VCR'S REMOTE

This Hitachi remote control can be used with your TV as well as the VCR, as long as your TV comes with a remote control. This feature comes in handy--you don't have to juggle two remotes.

The remote control is compatible with the fifteen makers of TVs listed below--but don't be alarmed if yours is not on our list. You may still be able to program the remote for your TV.

Every TV that comes with a remote control is set up to detect certain infrared signals. You need to program the VCR's remote control to send signals that your TV will recognize and respond to. Here's what to do:

## Compatibility

- The remote control is designed to be operated with many televisions and cable converters, but will not work with every one made. If your TV or cable box does not respond the way it should when you program it as explained follows, this remote may be incapable of operating it.
- Once you have programmed the remote, you won't have to do it again until you change the batteries.

## REMOTE CONTROL OF THE CABLE CONVERTER

If you have a cable converter, you will probably want to program your VCR's remote control so you can easily change channels. The process is the same as for programming the remote to operate your TV.

## PROGRAMMING THE REMOTE CONTROL OF THE CABLE CONVERTER

### 1 Program the remote control

Hold down the CATV button and press the number of your brand of cable box (shown in the chart).

**NOTE:** If that button combination does not work, or if your brand is not on the chart, just go through all the button combinations until you find the one that works best.

Cable Converters	Press the CATV and This Number
Jerrold 1	1
Jerrold 2	2
Jerrold 3	3
Hamlin	4
Zenith	5
Scientific Atlanta	6
Pioneer	7
Philips	8

## TO OPERATE THE CABLE BOX ONCE THE REMOTE IS PROGRAMMED FOR IT

### 1 Select the CATV function mode

Press the CATV button and then the button of the function you want.

*For example;*

Press the CATV button and the CH (▲), and the cable converter station will change to the next higher station.

**NOTE:** Also, you may change the channels at the cable converter by using the number buttons. If you can not change the channels at the cable converter by using the number buttons, press the ENTER button after you press the number buttons. It may change channels at the cable converter.

### 2 Return to the VCR function mode

Press the VCR button to operate your VCR with the remote again.

## REMOTE CONTROL OF THE TV

### PROGRAMMING THE REMOTE CONTROL OF THE TV

#### 1 Turn on the TV

Turn on the TV (any channel is okay).

#### 2 Program the remote control

Aim the VCR's remote control at your TV set. Hold down the TV button (not the VCR/TV button) while you press the number corresponding to your brand of television as shown in the chart.

*For example;* If you have an RCA television, press the TV and 0 at the same time. If this button combination sends a signal that matches with your TV, the channel will change on the TV, and you'll know the remote is set to control the television.

#### NOTES:

- If that button combination does not change the TV channel, go through the whole list of button combinations one by one until you find one that does change your TV channel.
- Also, if your brand of TV is not listed in the chart, try all the number buttons. One of them may work for you.
- If the TV channel still doesn't change after going through all the button combinations listed, it is likely that you will not be able to program this remote control for your TV.

TV Brands	Press the TV and This Number
Hitachi	1
Zenith	2
Sony	3
Magnavox	4
Sanyo	5
Gold Star	6
Toshiba	7
Funai	8
Panasonic 2	9
RCA	0
Panasonic 1	CH (▲ up arrow)
Mitsubishi	CH (▼ down arrow)
JVC	+100/ENTER
Sharp 1	MEMORY
Sharp 2	DISPLAY

### CONTROLLING THE TV

Once programmed, the VCR's remote control is ready to control the TV.

**NOTE:** Be aware that not all of your TV's functions may work even though the remote control is correctly programmed.

#### 1 Select the TV function mode

First press the TV button to change to the TV function mode, then press the button of the TV function that you want.

*For example;*

Press the TV button and the CH (▲), and the TV station will change to the next higher station.

**NOTE:** Also, you may change the channels at the TV by using the number buttons. If you can not change the channels at the TV by using the number buttons, press the ENTER button after you press the number buttons. It may change channels at the TV.

#### 2 Return to the VCR function mode

Press the VCR button to operate your VCR with the remote again.

## TROUBLESHOOTING GUIDE

If you have followed the instructions contained in this manual and have difficulty in operating your VCR, locate the **PROBLEM** in the left column below. Check the corresponding **CORRECTIVE ACTION** column to remedy the problem.

PROBLEM	CORRECTIVE ACTION
No power.	<ul style="list-style-type: none"><li>• Make sure the AC cord is connected to an AC outlet.</li><li>• Make sure the power is turned on.</li></ul>
Timer recording is not possible.	<ul style="list-style-type: none"><li>• Make sure the timer recording is set correctly.</li><li>• Make sure the power is off.</li><li>• Make sure the VCR clock is set correctly.</li></ul>
Cannot go into Record mode.	<ul style="list-style-type: none"><li>• Make sure the tape has an erase-prevention tab. If needed, cover the hole with plastic tape.</li></ul>
Playback picture is partially noisy.	<ul style="list-style-type: none"><li>• Adjust tracking control for a better picture by using the CHANNEL ▲ or ▼ button on the VCR.</li></ul>
No picture but the audio is OK in playback.	<ul style="list-style-type: none"><li>• Head cleaning may be necessary. Refer to "HEAD CLEANING" below.</li></ul>
No picture or poor picture on playback.	<ul style="list-style-type: none"><li>• Set your TV to the VCR mode and/or press the VCR/TV button on the remote control so that the "VCR" indicator on the display comes on.</li><li>• Fine tune your TV.</li></ul>
On-the-air TV programs cannot be seen.	<ul style="list-style-type: none"><li>• Re-check the ANT. IN and ANT. OUT connections. See page 8.</li><li>• Set your TV to the TV mode and/or press the VCR/TV button on the remote control so that the "VCR" indicator on the display disappears.</li></ul>
No operation from the infrared Remote Control.	<ul style="list-style-type: none"><li>• Make sure the AC cord is connected to an AC outlet.</li><li>• Check batteries in remote control.</li><li>• Press the VCR button on the remote control, then try again.</li></ul>
Video or color fades in and out when making a copy of a video tape.	<ul style="list-style-type: none"><li>• You cannot copy a copyrighted video tape. You are experiencing copy guard protection.</li></ul>

## MAINTENANCE

### SERVICING

Should your VCR become inoperative, do not try to correct the problem by yourself. There are no user-serviceable parts inside. Turn off, unplug the power cord, and take the unit to our Authorized Service Center for servicing.

### CABINET CLEANING

- Wipe the front panel and other exterior surfaces of the VCR with a soft cloth immersed in lukewarm water and wrung dry.
- Never use a solvent or alcohol. Do not spray insecticide liquid near the VCR. Such chemicals may cause damage and discoloration to the exposed surfaces.

### HEAD CLEANING

Playback picture may become blurred or interrupted while the TV program reception is clear. Dirt accumulated on the video heads after long periods of use, or the usage of rental or worn tapes can cause this problem.

If a streaky or snowy picture appears during playback, the video heads in your VCR may need to be cleaned.

1. Please visit your local Audio/Video store and purchase a good quality VHS Video Head Cleaner.
2. If a Video Head Cleaner does not solve the problem, consult our nearest Authorized Service Center. Professional video head cleaning requires highly technical attention.

#### NOTES:

- Remember to read the instructions included with the video head cleaner before use.
- Clean video heads only when problems occur.

## TECHNICAL SPECIFICATIONS

Format:	VHS
Video Signal System:	NTSC color EIA standard
Record/Playback System:	Video: 4 heads Audio: VHS Hi-Fi stereo record/playback system
Tape Speed:	33.35mm/s (SP), 16.67mm/s (LP)(Playback Only), 11.12mm/s (SLP)
RF Input:	UHF/VHF 75 ohm
Tuner:	181 channel tuning ability *(125 cable channels)
Type:	Auto programming frequency synthesis
Power Input:	AC120V 60Hz
Power Consumption:	14 W nominal
Cabinet Size:	17-1/8" (W) x 3-5/8" (H) x 8-1/2" (D) 43.5cm (W) x 9.2cm (H) x 21.6cm (D)
Weight:	5.51 lbs. (2.5 kg) (approx.)
Storage Temperature:	-4°F to 131°F
Operating Temperature:	41°F to 104°F
Accessories:	1 coaxial cable (Part No. 5857952), 1 remote control unit (Part No. HL11331), 2 AA batteries

\*Check your cable company's compatibility requirements.

- Design and specifications subject to change without notice.
- If there is a discrepancy between languages, the default language will be English.

### **DECLARATION OF CONFORMITY**

with FCC Rules for Electromagnetic Compatibility

Products: Video Deck

Models: VT-FX665A

Trade Name: HITACHI

This device complies with part 15 of FCC Rules. Operation is subject to the following two conditions:  
(1) this device may not cause harmful interference, and (2) this device must accept any interference received,  
including interference that may cause undesired operation.

Responsible Party: HITACHI AMERICA, LTD.  
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Tel: 619-661-0227